

Utah Department of Environmental Quality Division of Solid and Hazardous Waste Fact Sheet



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TESTING OF HAZARDOUS WASTE INCINERATORS

Currently it is neither economically or technically feasible to continuously monitor an incineration stack for emissions. Thus, hazardous waste incinerators must demonstrate the ability to meet all applicable performance standards when burning a waste under a specific set of operating conditions. This demonstration is called a "trial burn" or test burn.

Trial Burn

A trial burn involves the measurement of incinerator performance under different operating conditions.

Trial burns are designed to safely demonstrate the incinerator's capabilities to operate. During the trial burn, the owner or operator measures the waste feed rate, levels of carbon monoxide in the stack emissions, combustion temperature, combustion gas velocity, specific metals emissions, and other parameters. In order to make judgments concerning the incinerator's destruction and removal efficiency (DRE), the owner or operator must measure

the amount of principal organic hazardous constituents (POHCs) emitted from the incinerator.

Emissions

Emissions of particulate matter and hydrogen chloride are also measured during the trial burn, to determine the effectiveness of the pollution abatement systems. Emissions of the metals antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, silver, and thallium will also be measured.

Trial Burn Data

First, trial burn data will be evaluated to determine if the incinerator met applicable performance standards. Second, trial burn data may be used in a health risk assessment to ensure the operation of the incinerator will not impose an unacceptable risk.

Finally, if the incinerator meets the performance standards and the risk is acceptable, the trial burn data will be used to develop the incinerator's operating conditions. Some of the operating conditions that are continuously monitored are

indicators of combustion efficiency and operating performance.

Failure of Trial Burn

If the incinerator failed to meet any one of the performance standards, the incinerator design or operation must be modified, and the trial burn must be repeated before the permitting process can proceed to the next step.

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<http://www.eq.state.ut.us/eqshw/dshw-1.htm>